Analysis of the survey for SMEs using e-commerce in Lebanon

The purpose of this study has been to assist in determining the status of e-commerce in Lebanon and to improve the take-up of e-commerce.

Our approach comprised the following steps:

- A total of seventy five enterprises conducting e-commerce activity were identified.
- A four pages questionnaire was sent to all identified SMEs to collect information on the current situation of e-commerce. The survey is based on a population sample of twenty three enterprises that agreed to participate in the survey.
- In depth interviews were conducted with twenty three SMEs to assess the impact of e-commerce on their businesses, to identify bottlenecks.

**The current situation of the surveyed companies**:

- The majority of e-commerce activities is based on Business to Consumer (B2C) and is centralized in the Beirut area.
- Almost fifty percent of the enterprises have less than ten employees. Enterprises with more than 100 employees represent 13% of e-commerce activity.
- ICT penetration among e-commerce businesses stands at an acceptable level.
- Export market constitutes 70% of e-commerce activities in Lebanon.
- Broadband connectivity is not the norm. The internet speed and the cost of telecommunications and internet connectivity is a major issue for businesses.

- Majority of E-commerce websites have been fully integrated with in-house systems.
- Fraud cases were rarely encountered by businesses. However, laws and regulations are needed to give all e-transactions a legal protection.

Recommendations:

- The government needs to take action to improve telecommunication infrastructure and internet access. (i.e.: improve access, affordability and dependability of internet and other telecommunications services through liberalization and regulatory reform to increase effective competition). i.e.: refer to figures 8,9 & 12 of the survey results.
- There is a need to expedite the creation of legal framework for e-commerce.
- Assist SMEs on security concerns and e-marketing.
- Improve knowledge of customer /supplier of e-commerce.
- National program to assist SMEs in capacity building to encourage internet usage and improving IT skills. Similar initiative is recommended for rural areas.
- Assist SMEs in the tourism sector to have more international exposure through the e-commerce activity.
- The banking sector needs to provide a complete e-banking solution in order to make the end user adapt to e-commerce trend.

I-Enterprise Data

**Number of SME's
As per Area**

- ☐ Beirut
- ☐ Mount Leb
- ☐ North

17 %

5%

78 %
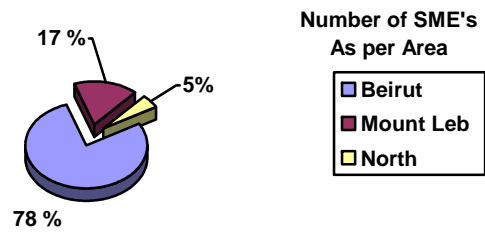
Our survey shows that 78% of the e-commerce activities are located in the Beirut area (18 out of 23). E-commerce is not present in the Bekaa and the south.
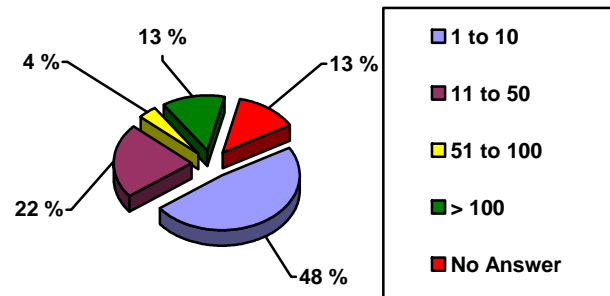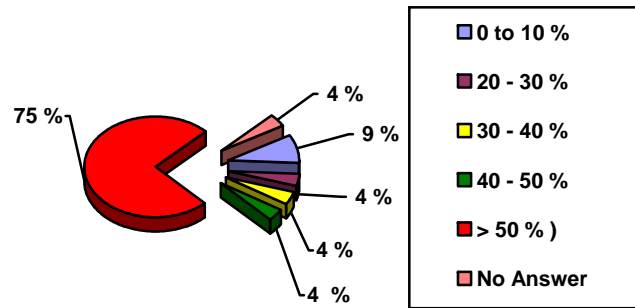
Figure 1   - Percentage of SME's as per area

- ☐ 1 to 10
- ☐ 11 to 50
- ☐ 51 to 100
- ☐ > 100
- ☐ No Answer

13 %

13 %

4 %

22 %

48 %

Figure 2   - Total number of Employees in Companies

| Legend |
|--------|
| ■ 0 to 10 % |
| ■ 20 - 30 % |
| ■ 30 - 40 % |
| ■ 40 - 50 % |
| ■ > 50 %) |
| ■ No Answer |

75 % 4 % 9 % 4 % 4 % 4 %

The majority of the staff of companies using e-commerce is computer literate. i.e.: 74% of SME's have more than 50 % of their staff computer literate.

Figure 3 - Percentage of staff computer literacy

Importing 26%

Exporting 70 %

0%   20%   40%   60%   80%
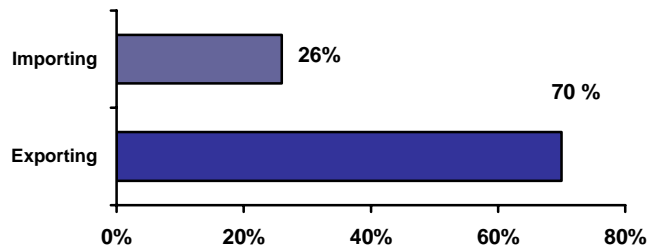
70% of SMEs that are using e-commerce are involved mainly in export. It is important to note that the same company could be doing import & export at the same time.
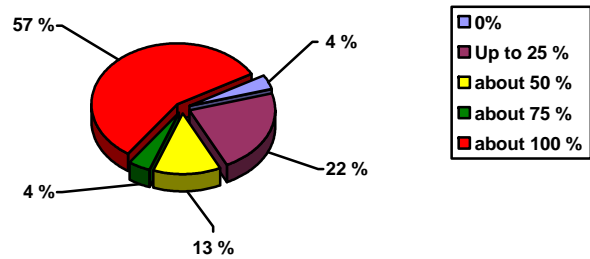The focus is the export market which targets mainly the Lebanese expatriates living abroad.

Figure 4 - Companies Exporting and Importing

Ecomleb

Figure 5 —Activity as per sector
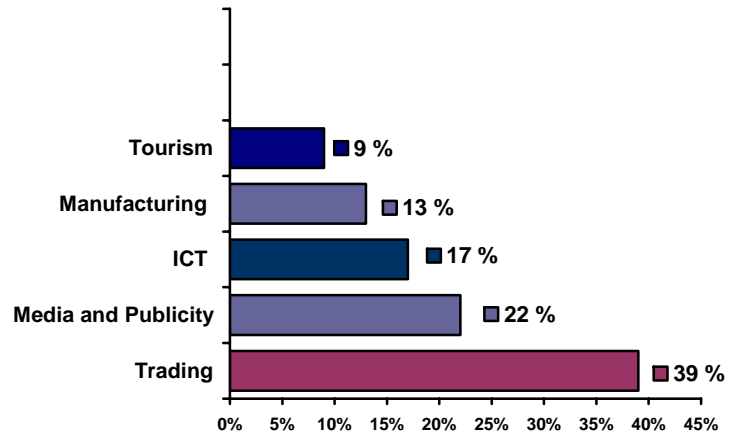
52% of e-commerce activity is in the Trading sector.
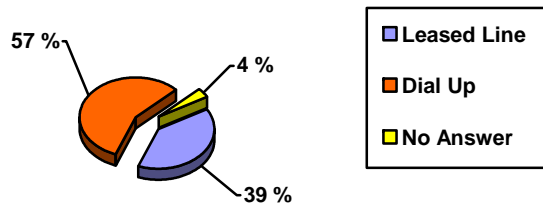
## II- Current Usage of internet and opinions

(13 out of 23) or 57% of SMEs have all of their employees accessing the Internet. These 13 SMEs are divided among the following sectors:
6 in trading, 4 in IT, 2 in Media and 1 in tourism.
The majority of them are small enterprises with less than 5 employees.

Figure 6 - Number of employees accessing the Internet

- This is a very important indicator to show that 57% or (13 out of 23) of SMEs conducting e-commerce are using dial up accounts versus lease line connection.

- The cost of telecommunication along with the quality and speed of the connection are important to businesses.

Figure 7 - Percentage of internet service type used by SMEs.
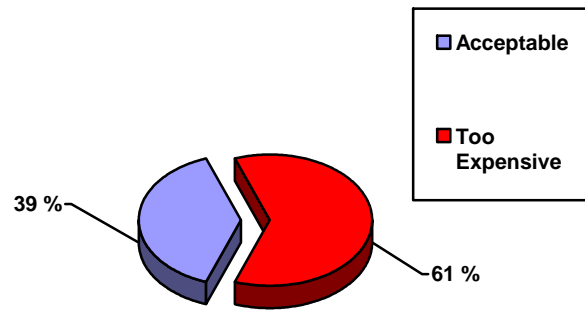
When asked about the internet prices, 61% or (14 out of 23) of SMEs believes the prices are too high. Meanwhile, 39% or (9/23) believes that the price of the internet connection is acceptable.

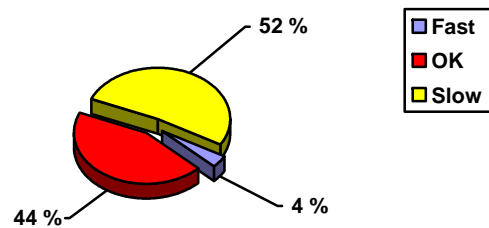**Figure 8 - Opinion about internet prices**

- In response to question about the speed of connection in Lebanon, 52% or (12 out of 23) of SMEs believe that the connection is slow while 43% said it is ok. 10 out of 23 are using dial-up connection while the other two uses leased line service.
- 10 out of 23 were satisfied with the speed. (3 using dial-up and 7 using leased line connections).

- People need more bandwidth with suitable prices. When interviewing some of the SMEs, especially the one who claimed the speed is okay, they meant the speed of connection is OK relative to cost. *(pls. refer to figure 8)*

Figure 9 - Opinion about speed of connection

Ecomleb
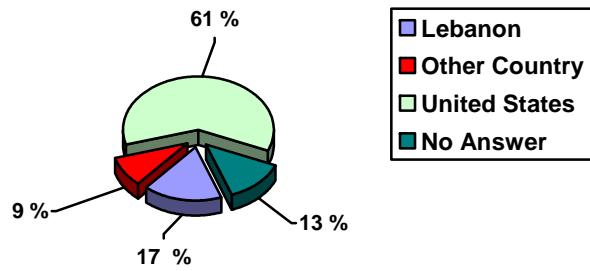
61% of SMEs using e-commerce in Lebanon have their websites hosted abroad, and mainly in the USA. The main reason is searching for cheaper cost and better service.

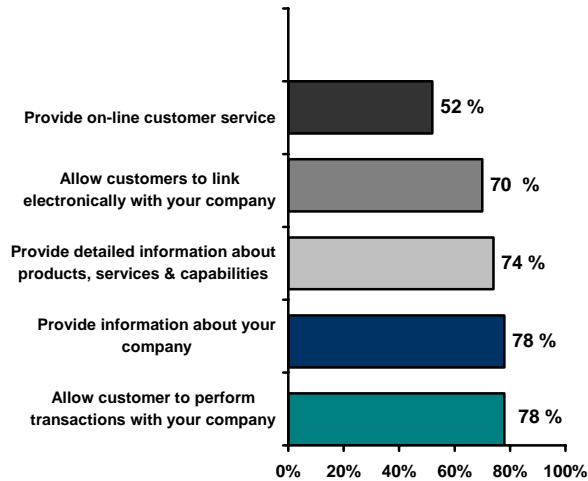**Figure 12- Percentage of website hosting**
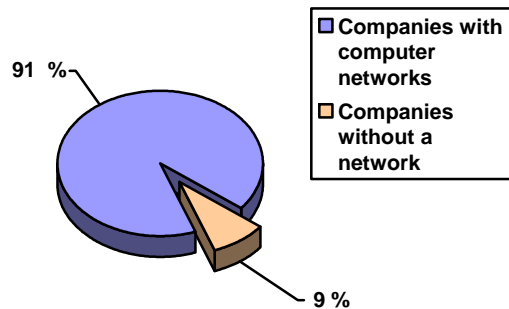
Figure 13 -Functionality of the web site

As it is shown in the chart, 78% of SMEs doing e-commerce allow customers to perform online transactions. Also, 78% claimed that they provide information about their companies.

Based on the interviews with SMEs, it was understood that some of them do not provide a full online payment system due to:

- Their customers' concern over credit card security,
- and/or the cost of payment system.

Figure 14 - Companies that have a computer network

91% of SMEs doing e-commerce have computer network within their enterprises. This figure justify that the ICT penetration in Lebanon might not be behind when compared to other countries in the region.
 Companies with computer Network (21/23)
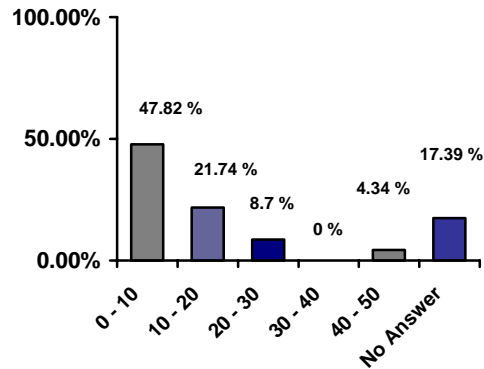 Companies without a Network (2/23)

Ecomleb

Figure 15 - Number of SME's whose computers can access the internet

Small companies with 1-10 computers have 43% of their PCs connected to the internet, whereas larger companies with 40-50 PCs have 4% of them connected.

This is contrary to what is happening in the USA and Europe where the trend is for larger companies to have higher percentage of PCs connected than smaller companies. In addition, larger companies tend to afford the internet cost more than smaller companies. Finally, this proves that smaller companies are involved in e-commerce in Lebanon.
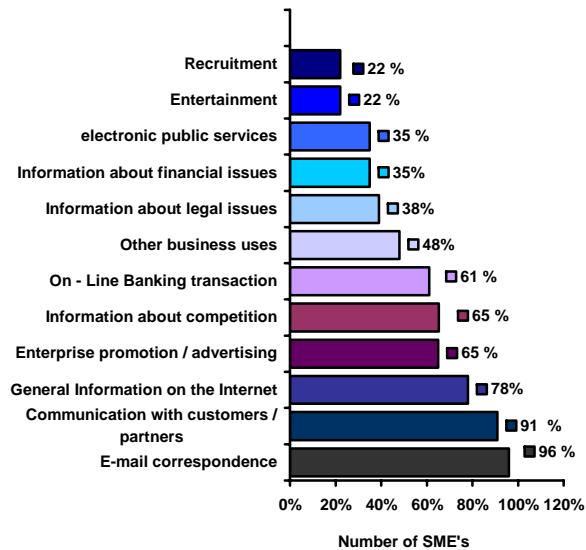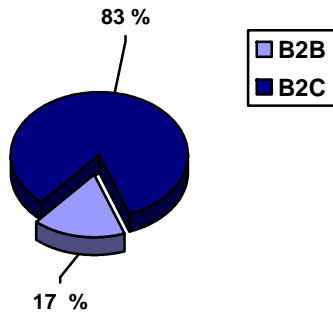

Figure 16   - Reasons for using Internet

SMES with e-commerce are mainly using the internet for:

- Email correspondence 96%
- Communication with customer / partners 91%
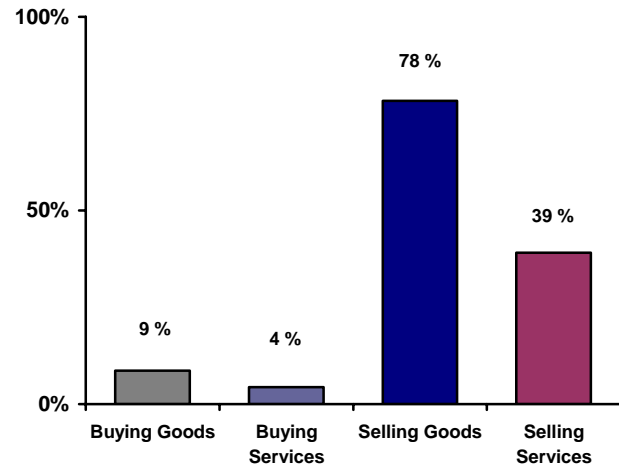- E-banking 61%

III-Current Usage of E-commerce

83 %

☐ **B2B**
■ **B2C**

17 %

Figure 17 - E-commerce system usage

83 % of e-commerce activity is B2C and 17% B2B.

B2B 4/23
B2C 19/23

78 %

39 %

9 %

4 %

| Buying Goods | Buying Services | Selling Goods | Selling Services |

Figure 18- Type of ecommerce

In the B2C area, 78% of e-commerce activity is for selling goods online and 39% for selling services. Whereas in the B2B area, 9% of activity is for buying goods and 4% for selling services.

This supports the argument that the B2B market is far behind the B2C in Lebanon which is opposite to what is going on internationally.

The above figures support the argument that the focus of e-commerce is for exporting Lebanese products to Lebanese expatriates or to foreign customers interested in Lebanese products or services.
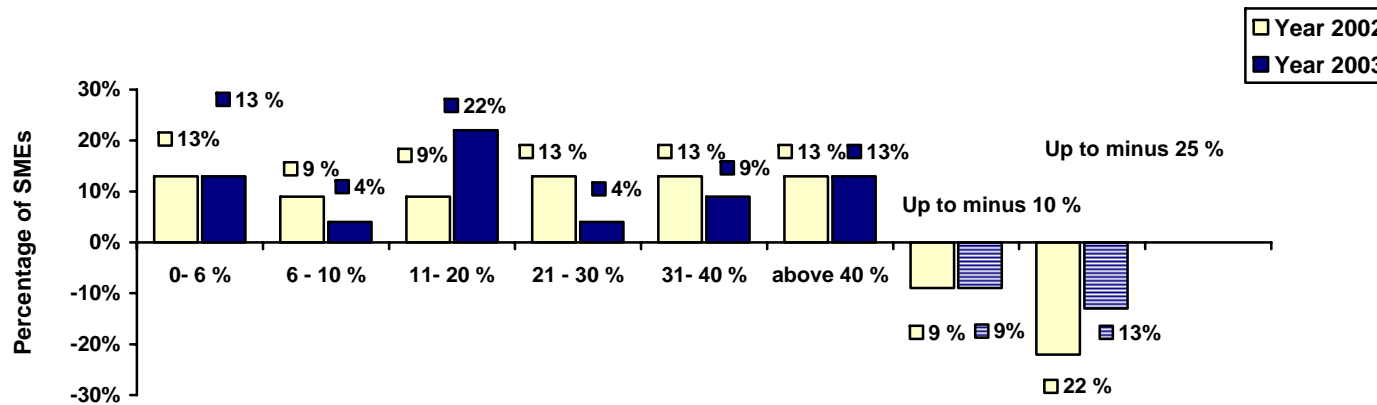
Ecomleb

Figure19 – E-commerce Growth Rate for Year 2002 -2003

Only 78% or (18 out of 23) of SMEs answered this question related to the growth of their businesses. The following are the highlights:

- In 2002, 7 out of 23 of SMEs had negative growth. This figure changed slightly in 2003 to reach 5 out of 23 SMEs.
- In 2002, 16 out of 23 of SMEs had positive growth. However, in 2003 the situation declined slightly to have 15 out of 23 SMEs with positive growth.

Further analysis of the results showed that the manufacturing, media and tourism sectors had flat growth. The trading and IT sectors had minor growth. Furthermore, companies with high growth rate of 40% were among the manufacturing, trading and tourism sectors were very small enterprises with less than 10 employees.

Ecomleb

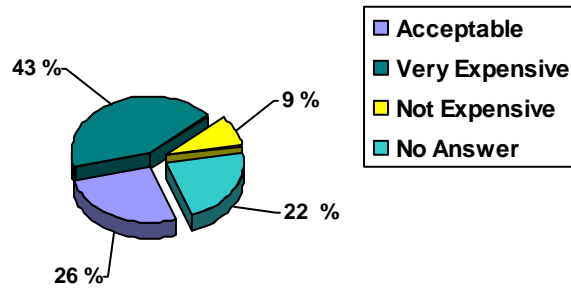## VI- Barriers and Inhibitors to E-commerce Solutions

Figure 20 - Opinion about payment system

43 % of SME's doing e-commerce claimed that the charges
of their payment systems are very expensive.
Acceptable (6/23)
Very expensive (10/23)
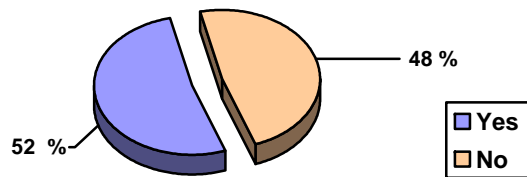Not expensive (2/23)
No Answer (5/22)

Figure 21 – Are E-banking Services provided by your bank

52% of SMEs using e-banking services. Details about these
services were included in the survey. In general, e-banking
services are limited to statement of account and personal
account transfer.

Yes 12/23
No 11/23

In general, the majority of banks are not providing complete e-banking
solution which includes service such as online letters of credit and
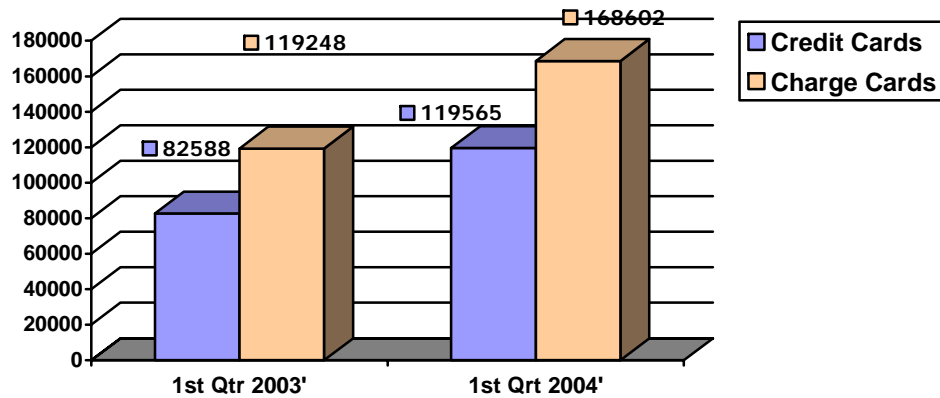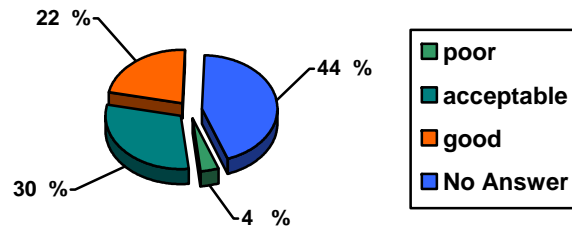guarantees, etc...

Figure 22 — Number of credit and charge card usage

As the chart shows for the credit cards the number of credit card users have increased from 2003′ to 2004′ by 36,977 card which constitutes0.97 % of the total population.

While the charge card figures show a 49,354 variation from 2003′ to 2004′ which consume 1.3 % out of the total population.

23- Opinion about E-banking Quality of Service

Apparently, SMEs expect more from the banking sector since 22% of them have rated the services as good. 43% could not answer this question which also supports the argument of better expectation from banks.

Poor 1/23
Acceptable 7/23
Good 5/23
No Answer 10/23

Analysis of the survey for Lebanese SMEs with potential to integrate e-commerce

The purpose of this study is to determine the potential of e-commerce in Lebanon among businesses.

Our approach comprised the following steps:

- A listing of SMEs was created based on data obtained from the Chambers of Commerce, Industry and Agriculture of Beirut & Mount Lebanon, Tripoli & the North, Saida and the South, and Zahle and the Bekaa, and the Association of Lebanese Industrialists. Companies with classification type 1 and 2 were only selected for our survey.
- Ten sectors were targeted which are: Manufacturing, Banking and Finance, Trading, Insurance, Healthcare, ICT, Publicity & Media, Tourism, printing and packaging, and construction/real estate.
- Close to 600 companies that have email addresses were selected for our survey.
- A three pages questionnaire was sent to all identified SMEs to collect information on their ICT penetration, and to find out their interest in e-commerce. So far, ninety six companies have participated in the survey.
- At least two third of the questionnaires were filled out during face to face interviews with SMEs.

The current situation:
- Computer literacy for larger companies (greater than 50 employees) is around 59% of total employees, whereas smaller companies have lower rate which sometimes reaches below 10%. This low rate is not very alarming since the manufacturing sector is included in the survey where PC usage is not a necessity for all employees. The e-readiness of SMEs stands at an acceptable level.
- Fifteen percent of SMEs provide access to the internet to all employees. This is a very low penetration figure for internet.
- Larger companies with 40-50 employees have 1% of their employees with internet access. This is a very bad figure which might be related to the high cost of telecommunications and internet connectivity. Further analysis is

needed to demonstrate the loss of productivity and opportunity cost as a result of not affording an internet connection.

- 75% of SMEs use internet dial up accounts. The speed of the internet is a major issue for businesses. The cost of telecommunication and the internet connectivity also constitute major barriers which have impact on profitability.
- Out of 96 companies which participated in the survey, 69% of them had a website.
- The majority of SMEs consider e-commerce as purchasing and selling online only.
- Seventy seven percent of SMEs' owners or managers have prior e-commerce experience.
- Seventy percent of SMEs claimed of having suitable products or services to be sold online.

Recommendations:

- The government can play a major role in promoting e-commerce by acting as a real model to its citizen (enhance government services on the web and government use of e-commerce)
- The creation of legal framework for e-commerce.
- Improve telecommunications infrastructure and internet access. (i.e.: improve access, affordability and dependability of internet and other telecommunications services through liberalization and regulatory reform to increase effective competition).
- Raising business awareness of e-commerce opportunities and benefits.

I- Enterprise Data
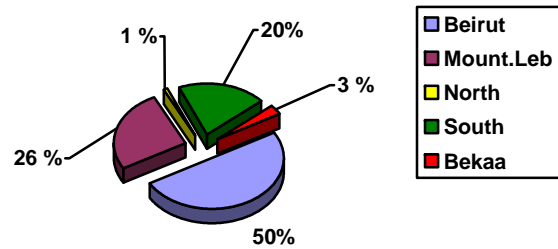
The response from SMEs in the North and the Bekaa to our survey was not as expected. (1% for the north and 3% for the Bekaa).

Figure 1   - Percentage of SME's as per area
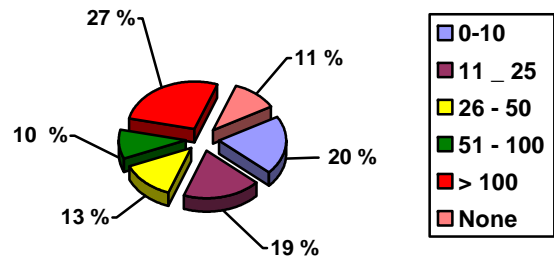
Our survey has targeted SMEs with various employment range.

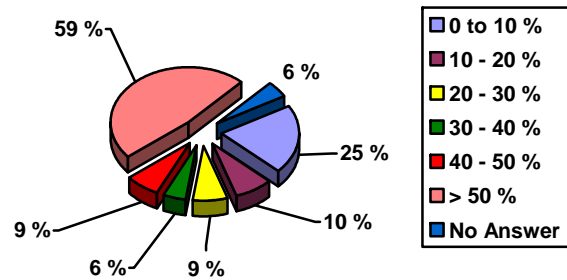**Figure 2   - Total number of Employees in Companies**

Figure 3 - Percentage of staff computer literacy

59% of SMEs have more than 50 % of their staff computer literate. The result demonstrates that Lebanese work force is not far away in catching up when it comes to ICT.
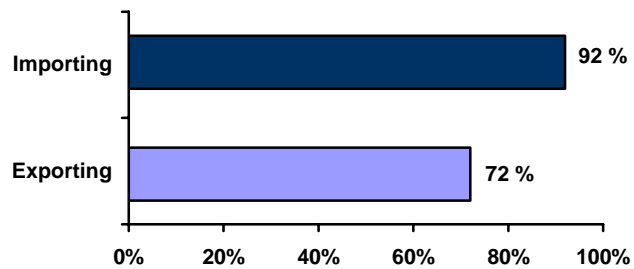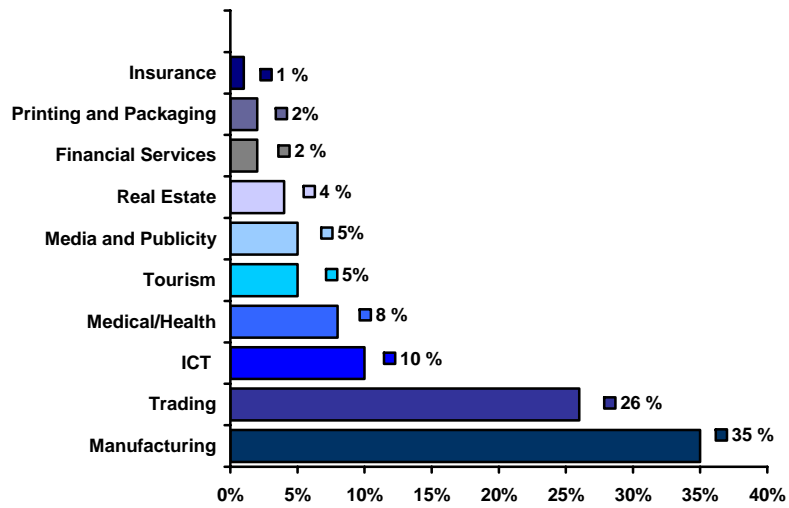

**Figure 4 - Companies Exporting and Importing**

We have tried to select SMEs with export orientation. However, the result of the survey shows that 92% of SMEs activity was for importing versus 72% for exporting.

The survey has targeted several sectors of the economy. Manufacturing and trading were the largest.

Figure 5 – Percentage as per Sector of Activity

Ecomleb

II- Current Usage of internet and opinions

☐	0%
■	Up to 25 %
☐	about 50 %
■	about 75 %
■	about 100 %
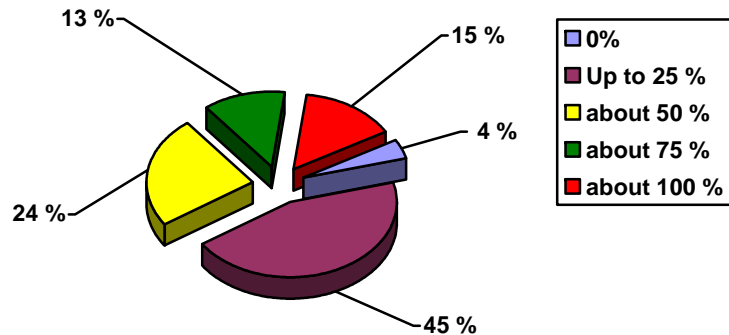
Fifteen percent of SMEs provide internet access to all staff. This is a very low penetration number for internet connection relative to the high level of staff's computer literacy.

Figure 6 - Number of employees accessing the Internet

☐	Leased Line
■	Dial Up
☐	No Answer
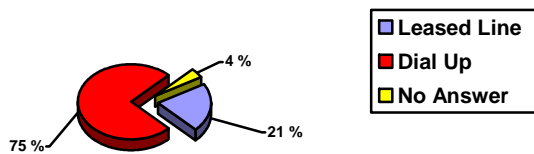
This is a very important indicator which shows that 75% of SMEs are using dial up accounts versus lease line connection. Further analysis shows the ratio of broadband usage was the highest in the tourism sector (4 SMEs with leased lines versus 1 SME with fixed line).

Figure 7 - Percentage of internet service type used by SME's.

47 %
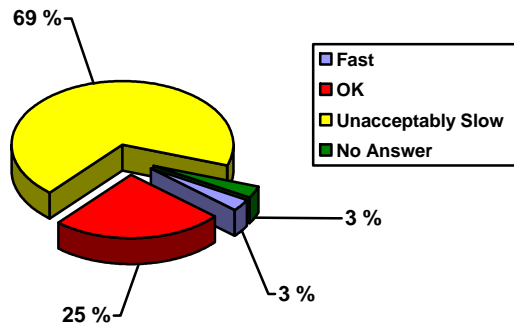
9 %

3 %

38 %

3 %

- ☐ Acceptable
- ■ Like to be informed about US and Eurpe Prices
- ☐ Not at all a problem
- ■ Too Expensive
- ☐ No Answer
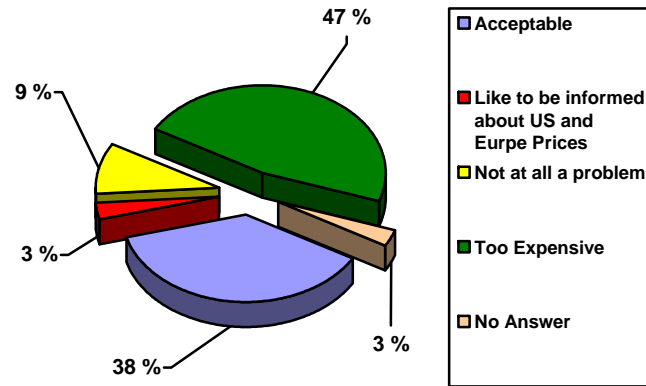
When asked about the internet prices, 47% of SMEs believes the prices are too high. Meanwhile, 37% believes that the price of the internet connection is acceptable.

Figure 8 - Opinion about internet prices

69 %

25 %

3 %

3 %

- ☐ Fast
- ■ OK
- ☐ Unacceptably Slow
- ■ No Answer

In response to question about the speed of connection in Lebanon, 69% of SMEs believe that the connection is slow while 25% said it is ok.

Figure 9 - Opinion about speed of connection

Ecomleb
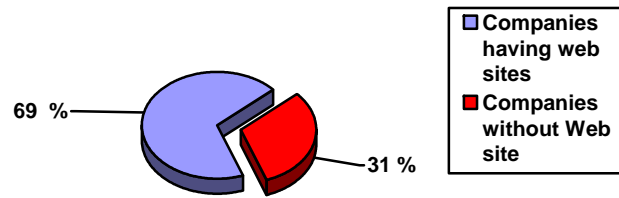
Among the SMEs that participated in our survey, 69% of them had a website.

Figure 11 - Percentage of companies having web sites
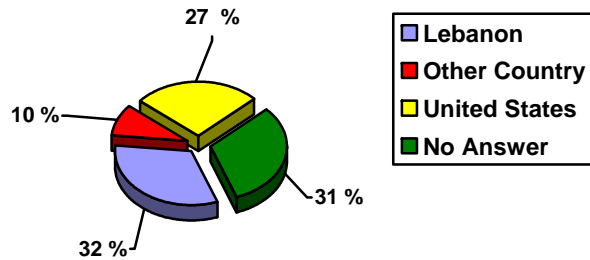
When we asked the question about the hosting location of their website, only 32% had the server hosted in Lebanon.

During the interviews, the cost of the local hosting was the main reason for using abroad services for hosting.

Figure 12- Percentage of website hosting
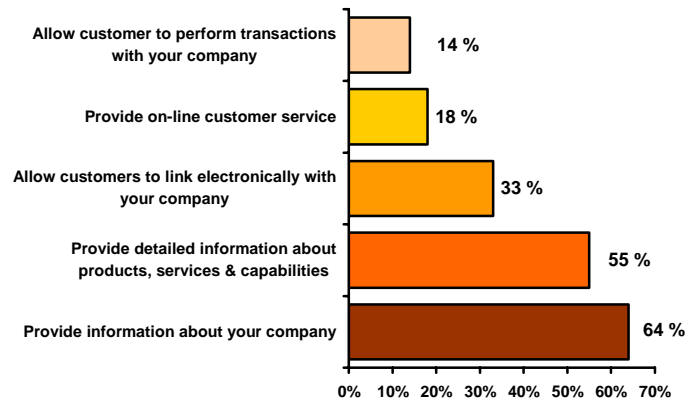
Figure 13 -Functionality of the web site
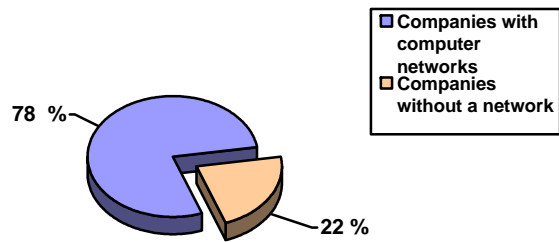
Sixty four percent of SMEs′ websites have informative nature ignoring the added value of e-commerce.

Figure 14 - Companies that have a computer network

78% of SMEs have computer network within their enterprises. This figure justify that the ICT penetration in Lebanon might not be behind when compared to other countries in the region.
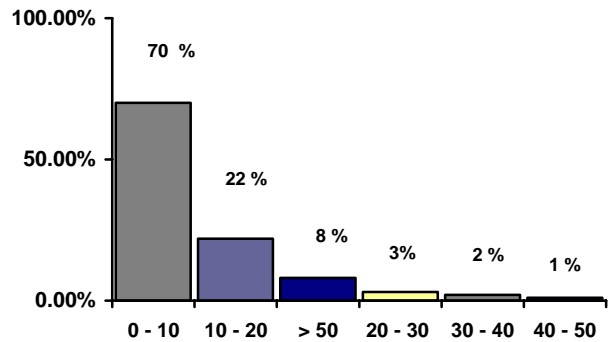
According to the survey, small companies with 1-10 computers have 70% of their PCs connected to the internet, whereas larger companies with 40-50 PCs have 1% of them connected.

This is contrary to what is happening in the USA and Europe where the trend is for larger companies to have higher percentage of PCs connected than smaller companies. In addition, larger companies tend to afford the internet cost more than smaller companies.
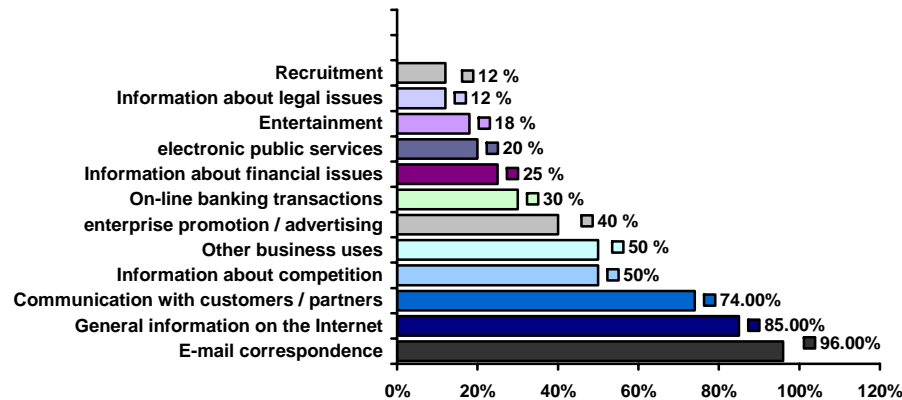
Figure 15 - Percentage of SME's whose computers can access the internet.

When SMEs were asked about the purpose of using the internet, large percentage high figures were for:

96% for email correspondence
84% for general information on the internet
74% for communicating with customers/partners

It is important to highlight that online banking came at 31% and public services at 20%.

Figure 16   - Reasons for using Internet

III-Current Usage of E-commerce
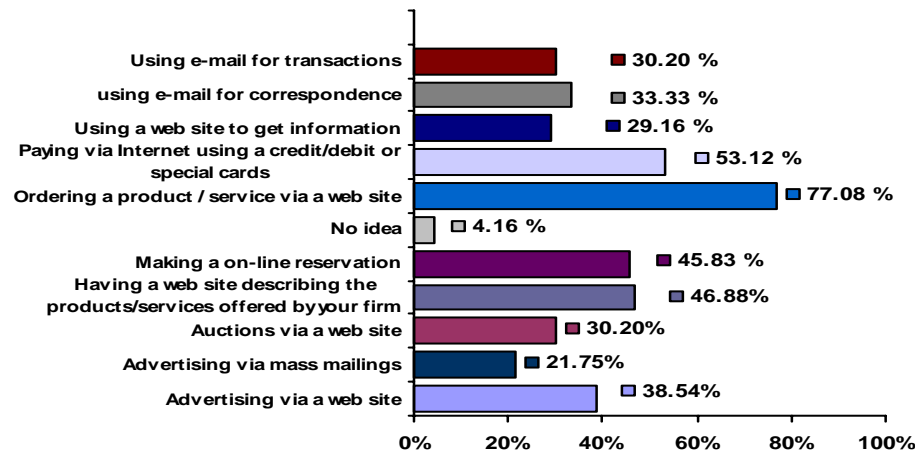
For Lebanese businesses, e-commerce meant mainly ordering and paying online for products or services.

Only 33% of SMEs consider using email for transactions and correspondences as e-commerce activity.

Figure 17   - Ecommerce means according to SME's

When SMEs were asked their reasons for not implementing an e-commerce system, 67% of them left the question unanswered.
10% had no budget and 7% were afraid of potential fraud.

Awareness campaign is needed to educate SMEs about the benefits of e-commerce.

Figure18 – Interest in e-commerce systems

The following highlights reflect the answers of SMEs to the question related to the potential of e-commerce for SMEs:
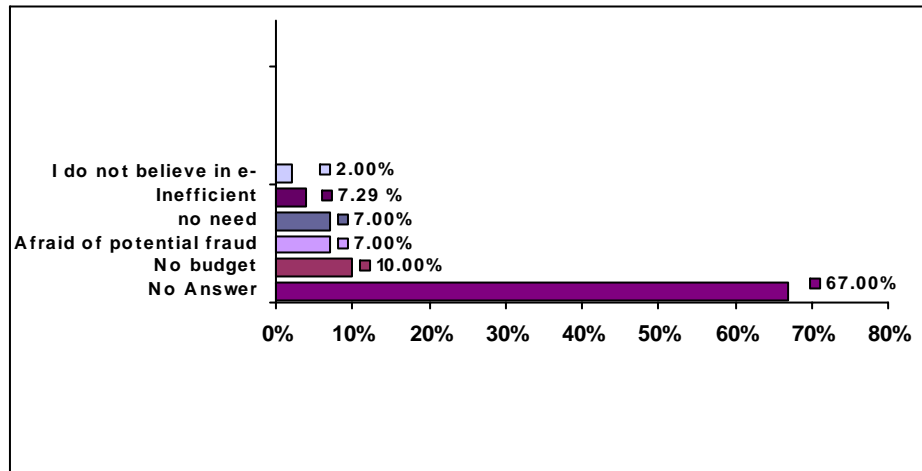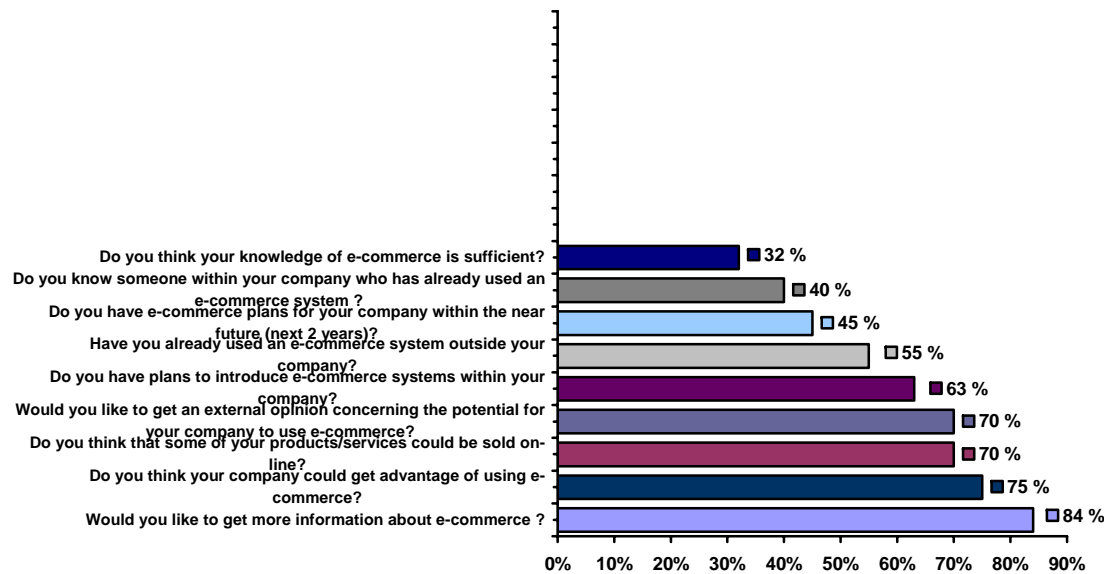
- 77% of business people claimed having prior experience in using e-commerce outside the company. This is an encouraging figure.

- 70% of SMEs believed that some of their products or services could be sold online.

- 39 % of SMEs have plans to introduce e-commerce systems within their company

Chart data:

- Do you think your knowledge of e-commerce is sufficient? — 32 %
- Do you know someone within your company who has already used an e-commerce system ? — 40 %
- Do you have e-commerce plans for your company within the near future (next 2 years)? — 45 %
- Have you already used an e-commerce system outside your company? — 55 %
- Do you have plans to introduce e-commerce systems within your company? — 63 %
- Would you like to get an external opinion concerning the potential for your company to use e-commerce? — 70 %
- Do you think that some of your products/services could be sold on-line? — 70 %
- Do you think your company could get advantage of using e-commerce? — 75 %
- Would you like to get more information about e-commerce ? — 84 %

Figure 19 – Plans for future development of e-commerce

Analysis of the survey for the academic sector to determine the level of expertise in e-commerce

Our approach comprised the following steps:

- A listing of all major academic institutions have been prepared, which included universities, technical institutions, and professional centers.
- Four pages questionnaire was sent to nineteen selected institutions to participate in the survey. Face to face interviews were conducted to collect the needed information. Nine institutions responded to our survey.
- Participants' Names: (American University of Beirut, Lebanese American University, University Saint Joseph, University of Balamand, Notre Dame University, Haigazian Univerity, American University of Science & Technology, University La Sagesse, Center Universitaire de Technologie, and Formatech, Inc.)

The current situation:

- Nine out ten institutions are offering e-commerce courses.
- Majority of e-commerce courses are offered by the Business Schools of the universities.
- The offered courses vary from the fundamentals of e-commerce to advanced level of supply chain management. Most institutions are offering introductory or basic e-commerce courses.
- Technical schools and professional training centers are not involved in teaching e-commerce in Lebanon.

Recommendations:

- Academic institutions should provide structured academic program for e-commerce laws.
- E-commerce academic studies shall be integrated with the business sector needs.
- Academic staff teaching E-commerce related material should have the enough experience and must be aware for any new changes or development in the trend
- Academic institutions should have their own e-commerce solutions as a real model for the government and the business sector and for their students

Total number of graduates per annum

Log Frame

Major	Degree	Number of Graduates					
		Years					
		1999	2000	2001	2002	2003	2004
Computer Science	Bachelor	209	176	248	267	307	443
	Master	23	25	38	22	22	28
	Diploma						
	PhD						
Business Administration	Bachelor	921	950	1120	1320	1365	1508
	Master	271	251	313	414	395	433
	Diploma						
	PhD						
Computer Engineering	Bachelor	93	110	129	172	212	173
	Master	35	18	21	28	23	35
	Diploma						
	PhD						
Others	Bachelor	181	163	126	162	204	235
	Master	7	20	30	38	25	22
	Diploma						
	PhD						
Total	Bachelor	**1404**	**1399**	**1623**	**1921**	**2088**	**2359**
	Master	**336**	**314**	**402**	**502**	**465**	**518**
	Diploma						
	PhD						

Listing of e-commerce courses offered by various academic institutions in Lebanon:

- Introduction to E-commerce
- E-commerce Fundamentals
- E-commerce Strategy & Applications
- E-commerce & Technologies
- Design of E-commerce Applications
- How Internet Works
- E-Security
- E-Marketing
- E-Finance
- E-Banking
- Legal Regulation of E-commerce
- E-commerce Pay System and Banking
- E-commerce Strategy
- Creation of Websites
- Hosting

Listing of related courses offered by the academic institutions:

- Supply Chain Management
- Entrepreneurial Management
- Marketing Information & System Integration
- Interoperability & System Integrations
- Programming E-commerce website
- How to design an e-commerce website
- Creation of Websites
- How internet works

Distribution of courses per institution:

Institution Name	Number of E-commerce Courses	Number of Related Courses
American University of Beirut	8	1
American University of Science & Technology	2	
Balamand University	3	
Formatech Inc.	0	
Haigazian University	1	
Lebanese American University	2	
Notre Dame University	1	
University Saint Joseph	6	4
Centre Universitaire de Technologie	6	2
University la Sagesse	7	1

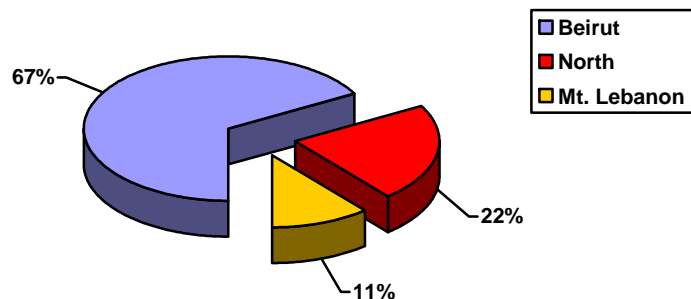## Analysis Tabulation for the Academic Survey

Figure -1 Percentage of distribution of universities according to area

The survey included all regions. The south and the Bekaa are not reflected since universities headquarters are centralized in the Beirut area.
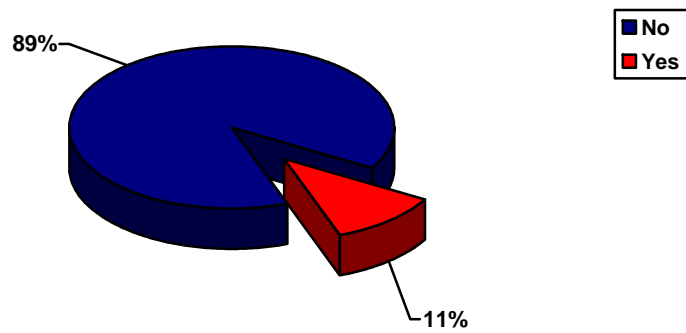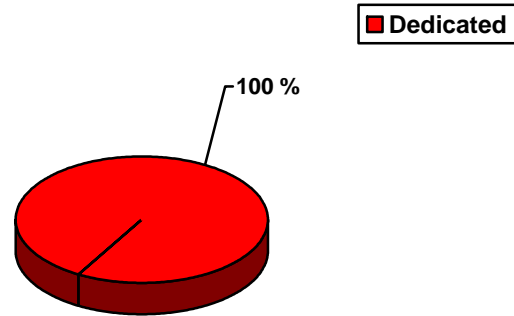
89%

No
Yes

11%

One out of nine universities replied to the survey, has e-commerce activity

Figure -2 Percentage of universities Practicing e-commerce on there site

Ecomleb

Dedicated

100 %

All the universities use a dedicated leased line which is considered a positive approach to make the students and the staff use the internet more

Figure – 3 Type of connection to the internet

100%
80%
60%
40%
20%
0%

44%

11%

78%

11%

Computer Science

Computer Engineering

Business Admin
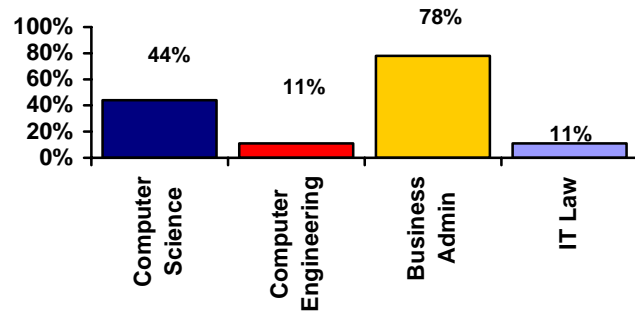
IT Law

E-commerce courses teaching is focused in the Business Administration major which sums up 78 % , relative to computer engineering and IT law which they have the lowest percentage 11%

Figure – 4 Percentage e-commerce courses as per major

Ecomleb

67%

| ■ Yes |
| ■ No answer |

33%
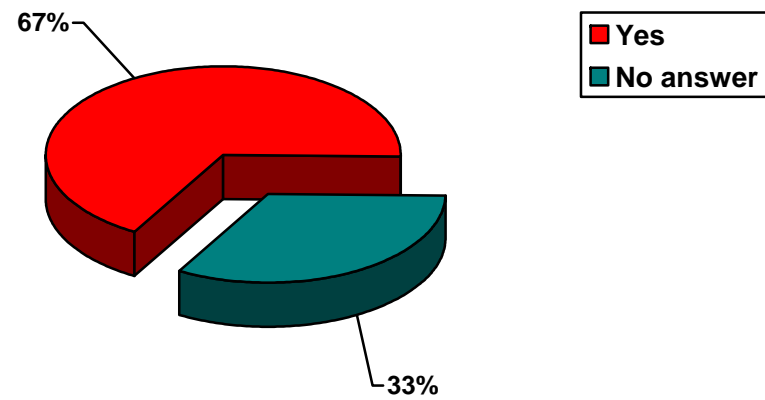
67 % of universities plan to offer ecommerce courses in their academic curriculum while 33 % did not reply to the survey regarding future ecommerce activities.

Figure – 5 Plans for ecommerce courses offerings in the future.